PATENT ABSTRACTS OF JAPAN

(54) CHARGING MANAGEMENT SYSTEM FOR COLOR PRINTER

(57)Abstract:

PURPOSE: To constitute the system so that charging of a color printer can be managed automatically by an individual unit, in the case where many users share and utilize the color printer connected to a network, in a large computer center, a company, etc.

CONSTITUTION: A charging management information extracting means 8 extracts information required for a charging management from image information 3. The extracted charging management information is accumulated in a charging file 11. At the time of executing a charging demand to a user, a count-up program 9 is actuated. The count-up program 9 reads out the charging management information from the charging file 11, and generates charging demand information of each individual. The generated charging demand information is outputted as a slip by a slip output means, and also, stored in a count-up file 13.

LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

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[Date of final disposal for application]

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[Date of extinction of right]

CLAIMS

[Claim(s)]
[Claim 1] The accounting managerial system of the color printer carry out including an accounting management information extraction means to extract information required for accounting management of a printer from image data, a storage means to memorize the accounting management information extracted by this accounting management information extraction means, and a total means to total the accounting claim information for every individual based on the accounting management information memorized by this storage means as the feature.

[Translation done.]

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Industrial Application] Especially this invention relates to the accounting managerial system of a color printer in case many users do share use of the color printer which carried out network connection in a large-sized computer center, a company, etc. about the accounting managerial system of a color printer.
[0002]
[Description of the Prior Art] In recent years, the computer which adopted UNIX as the operating system is spreading. However, since UNIX originally was not premised on use of a lot of people, there was no awareness of the issues over accounting management of the color printer linked to the computer.
[0003] Moreover, since output number of sheets etc. was counted by the color copier side when a color copier was used as a color printer, there was no function in which a computer performs accounting management.
[0004]
[Problem(s) to be Solved by the Invention] With the above-mentioned conventional technology, accounting of a color printer was not automatically manageable per individual.
[0005] this invention is made in view of such a situation, and is to offer the accounting managerial system with which two or more users manage output accounting of a color printer automatically per individual in the system which carries out share use of the color printer.
[0006]
[Means for Solving the Problem] In order to attain the above-mentioned purpose, the accounting managerial system of the color printer of the invention in this application has an accounting management information extraction means to extract information required for accounting management from image data, a storage means to memorize the accounting management information extracted by this accounting management information extraction means, and a total means to total the claim information for every individual based on the accounting management information memorized by this storage means.
[0007]
[Example] Next, this invention is explained with reference to a drawing. Drawing 1 is the block diagram showing one example of this invention. In the accounting managerial system 7, the accounting program 8 inputs image data 3, extracts accounting management information required for accounting management from image data 3, and outputs it to an accounting file 11. From an accounting file 11, the total program 9 inputs accounting management information, and creates the accounting claim information according to individual. The document output means 12 outputs as a document the accounting claim information according to individual created by the total program 9. Moreover, the accounting claim information according to individual created by the total program 9 is outputted also to the total file 13, and is memorized.
[0008] Next, operation of the accounting managerial system of drawing 1 is explained. First, a printing instruction is received, and before the sent-out image data 3 is inputted into the interface 4 which is an interface with a color printer 6, it is inputted into the accounting managerial system 7. The accounting program 8 of the accounting managerial system 7 extracts information required for accounting management for a host name, a login name, an accounting file name, printing time, the use number of sheets of a form, the amount of each ink used, etc. from the inputted image data. Thus, the extracted accounting management information is outputted to an accounting file 11, and is accumulated.
[0009] The image data 3 after management information extraction is handed over by the interface 4, and the color printer 5 which is outputted to a color printer 5 and which received image data 3 performs printing according to the same processing as usual.
[0010] When performing an accounting claim to a user based on the accounting management information accumulated as mentioned above, a system administrator starts the total program 9. The total program 9 reads the accounting management information accumulated at the accounting file 11, and creates statistics of the accounting claim information according to individual, and a print-out. They are memorized by the total file 13 while the printout of statistics of the accounting claim information according to created individual and a print-out is carried out by the document output means 12 as a bill according to individual.
[0011] Moreover, the sending error program 10 is also formed in this example. the sending error program 10 -- form **** and development -- reduction of service water, a paper jam, etc. transmit the error message corresponding to the content to a

system administrator by mail 14 in response to the error information transmitted from a color printer 5 In this case, if specification of the transmission place of mail and an input device is separately directed by the environmental file, it can respond to change of a future device etc. flexibly.

[0012] Next, the method for an actual UNIX system realizing the accounting program 8 in this example is explained. The accounting program on a UNIX system can be described using the technique of the filter program of UNIX.

[0013] Extraction of a host name, a login name, and an accounting file name is realizable by using a print demon (lpd) among the functions of an accounting program. Here, it is UNIX in a print demon lpd. When the print command lpr of a BSD system is executed, it is the program which controls print processing by the background. When a print command lpr is started, a print demon lpd hands over a host name, a login name, and an accounting file name. At this time, the host name, login name, and accounting file name which were handed over can be used as management information as it is.

[0014] Moreover, extraction of other management information can realize time etc. using the system calls (for example, DATE etc.) of UNIX.

[0015] In the design using such a system call, the image data 3 outputted to the color printer five times is eliminated automatically. However, it is desirable to save image data during a fixed period in the system applied for a lot of people's user like this invention. Therefore, although it is necessary to create the program which stores image data in the file prepared separately during a fixed period, such a program can be created using C.

[0016] In addition, they are Fuji film PICTOROGRAPHY2000 and canon PIXEL about the invention in this application. When it applies to EPO, it is checked that a good result is obtained. Furthermore, three computers constituted the network, the two above-mentioned sets of color printers were connected, and it has succeeded also in the test employment used during a fixed period by about 40 users, and is this application.

[0017]

[Effect of the invention] As mentioned above, the accounting managerial system of the color printer by this invention can manage accounting of a color printer automatically per individual, when network connection of the color printer is carried out and two or more users do share use, since an accounting management information extraction means extracts accounting management information from image data, the accumulated accounting management information is totaled by the total means and the accounting claim information according to individual is created. That is, according to this invention, accounting of a color-print to thousands of people user of a scale in a university computer center etc. can unify and manage with other accounting items.

[Translation done.]

TECHNICAL FIELD

[Industrial Application] Especially this invention relates to the accounting managerial system of a color printer in case many users do share use of the color printer which carried out network connection in a large-sized computer center, a company, etc. about the accounting managerial system of a color printer.

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PRIOR ART

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EFFECT OF THE INVENTION

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TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] With the above-mentioned conventional technology, accounting of a color printer was not automatically manageable per individual.
[0005] this invention is made in view of such a situation, and is to offer the accounting managerial system with which two or more users manage output accounting of a color printer automatically per individual in the system which carries out share use of the color printer.

[Translation done.]

MEANS

[Means for Solving the Problem] In order to attain the above-mentioned purpose, the accounting managerial system of the color printer of the invention in this application has an accounting management information extraction means to extract information required for accounting management from image data, a storage means to memorize the accounting management information extracted by this accounting management information extraction means, and a total means to total the claim information for every individual based on the accounting management information memorized by this storage means.

[Translation done.]

EXAMPLE

[Example] Next, this invention is explained with reference to a drawing. Drawing 1 is the block diagram showing one example of this invention. In the accounting managerial system 7, the accounting program 8 inputs image data 3, extracts accounting management information required for accounting management from image data 3, and outputs it to an accounting file 11. From an accounting file 11, the total program 9 inputs accounting management information, and creates the accounting claim information according to individual. The document output means 12 outputs as a document the accounting claim information according to individual created by the total program 9. Moreover, the accounting claim information according to individual created by the total program 9 is outputted also to the total file 13, and is memorized.

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[Translation done.]

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] It is the block diagram showing one example of the accounting managerial system of the color printer concerning this invention.
[Description of Notations]
1 Computer
2 Image-Processing Result
3 Image Data
4 Interface
5 Color Printer
6 Interface
7 Accounting Managerial System
8 Accounting Program
9 Total Program
10 Sending Error Program
11 Accounting File
12 Document Output Means
13 Total File
14 Mail

[Translation done.]

コンピュータ ～1

画像処理結果 ～2

画像データ ～3

I/F 4

5

I/F 6

カラー プリンタ

課金管理システム

課金プログラム 8

エラー
送信プログ
ラム 10

7

14

メール

集計プログラム 9

～12
帳票出力手段

～11

課金ファイル

～13

集計ファイル

[Translation done.]